

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1–9 (canceled)

Claim 10 (new). A data switch for passing packets as a plurality of sets of one or more packet flows between a plurality of ports, the data switch comprising:

a flow detection device configured to detect a set of one or more packet flows to which an incoming packet belongs; and

a bandwidth monitoring device having a memory with a section associated with each set of one or more packet flows, the bandwidth monitoring device configured to issue policing instructions based on the size of the packets and a bandwidth counter stored in the memory.

Claim 11 (new). The data switch according to claim 10, wherein the memory comprises a RAM memory.

Claim 12 (new). The data switch according to claim 10 further comprising a plurality of bandwidth counters, each corresponding particularly to a corresponding set of one or more packet flows.

Claim 13 (new). The data switch according to claim 10, wherein the bandwidth monitoring device is configured to issue the policing instructions of a type selected based in part on the detected set of one or more packet flows.

Claim 14 (new). The data switch according to claim 10, wherein each set of one or more flows is associated with one of a plurality of policing instructions, said plurality of policing instructions including dropping a packet and reducing a packet priority.

Claim 15 (new). A data switch for passing packets as sets of one or more packet flows between a plurality of ports, the data switch comprising:

- a flow detection device configured to detect a set of one or more packet flows to which each packet belongs; and

- a bandwidth monitoring device having a RAM memory with a section corresponding to each set of one or more packet flows, the memory sections each containing a bandwidth counter for the corresponding set of one or more packet flows, the bandwidth monitoring device being configured to:

- subtract the size of the packet from a value of the bandwidth counter corresponding to the detected set of one more packet flows to obtain an adjusted value and to issue a policing instruction according to the relationship of the adjusted value with one or more predetermined levels;

- replace the value of the bandwidth counter corresponding to the detected set of one more packet flows by the adjusted value in the event that the packet is transmitted by the switch; and

replenish the value stored in each bandwidth counter at intervals.

Claim 16 (new). The data switch according to claim 15 wherein the one or more predetermined levels include a first predetermined level corresponding to a first set of one or more flows and a second predetermined level, different from the first predetermined level, corresponding to a second set of one or more flows.

Claim 17 (new). The data switch according to claim 16 wherein data representative of the one or more predetermined levels is stored in the RAM memory.

Claim 18 (new). The data switch according to claim 17 wherein the RAM memory includes control parameter indication portions for each of the sets of one or more flows, the control parameter indication portions indicating respective registers for storing the data representative of the one or more predetermined levels.

Claim 19 (new). The data switch according to claim 15 wherein data representative of the one or more predetermined levels is stored in the RAM memory.

Claim 20 (new). The data switch according to claim 15 wherein the plurality of sets of one or more flows are grouped into ranges, and wherein the policing instructions in respect of a particular set of one or more flows depends upon the range in which the set of one or more flows lies.

Claim 21 (new). The data switch according to claim 15, wherein each set of one or more flows is associated with one of a plurality of policing instructions, said plurality of policing instructions including dropping a packet and reducing a priority packet.

Claim 22 (new). A method of policing flows of packets within a data switch for passing packets between a plurality of ports, the method including:

- storing a bandwidth counter for each of a plurality of sets of one or more flows in a RAM memory, the RAM memory having a corresponding section for each of the sets of one or more flows;

- detecting the set of one or more flows to which a packet belongs;

- subtracting the size of the packet from the value stored in the bandwidth counter corresponding to the set of one or more flows to obtain an adjusted value;

- issuing a policing instruction based on the adjusted value according to the position of the adjusted value with respect to predetermined levels;

- if, despite any such policing instruction, the packet is transmitted, adjusting the value stored the bandwidth counter corresponding to the set of one or more flows by the size of the packet; and

- replenishing the value stored in each bandwidth counter at intervals.

Claim 23 (new). The method according to claim 22 wherein the predetermined levels include a first predetermined level corresponding to a first set of one or more flows and a second predetermined level, different from the first predetermined level, corresponding to a second set of one or more flows.

Claim 24 (new). The method according to claim 23 wherein data representative of the predetermined levels is stored in the RAM memory.

Claim 25 (new). The method according to claim 24 wherein the RAM memory includes control parameter indication portions for each set of one or more flows, the control parameter indication portions indicating respective registers for storing the data representative of the predetermined levels.

Claim 26 (new). The method according to claim 22 wherein the sets of one or more flows are grouped into ranges, and wherein the policing instructions in respect of a particular set of one or more flows depends upon the range in which the set of one or more flows lies.

Claim 27 (new). The data switch according to claim 22, wherein each set of one or more flows is associated with one of a plurality of policing instructions, said plurality of policing instructions including dropping a packet and reducing a priority packet.

Claim 28 (new). The method according to claim 27 wherein the predetermined levels include a first predetermined level corresponding to a first set of one or more flows and a second predetermined level, different from the first predetermined level, corresponding to a second set of one or more flows.

Claim 29 (new). The method according to claim 28 wherein data representative of the predetermined levels is stored in the RAM memory.